Objective
Mobile Automated Instrumentation Suite

(MAIS)

PM ITTS STOC Industry Conference

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Presenter:

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BACKGROUND

- MAIS is a fielded system which provides the high fidelity, realistic, encrypted Real Time Casualty Assessment (RTCA) architecture to support the U.S. Army Operational Test Command's (OTC) mission to conduct operational testing and evaluation used to measure the performance of hardware and personnel under tactical conditions

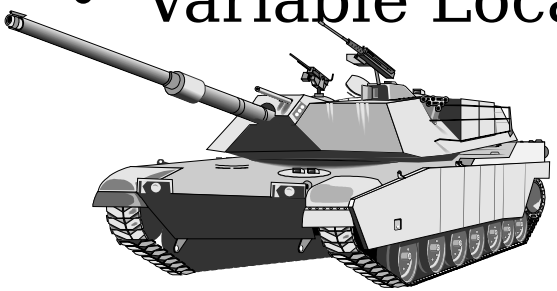
- MAIS must instrument current and emerging weapons to include ground vehicle, dismounted troop, rotary wing and fixed wing aircraft

- The current MAIS system suffers from a number of shortcomings:
  - unable to adequately instrument Rotary Wing Aircraft, Fixed Wing Aircraft, Air Defense Artillery, and indirect fire systems
  - size and weight constraints
  - high support costs

MAIS
C3 Center
Rotary Wing
Fixed Wing
Crew Served Weapons
Ground Vehicles
Dismounted Troops
IRW9/24/96P-TRI96-4

MAIS
CURRENT CAPABILITY OVERVIEW

- Test or Train in a Full Air/Ground Battle Environmen
  High Fidelity Simulation
  - Direct and Indirect Fire
  - Area Weapons Effects (Chemical, Artillery)
  - Ground-to-Ground, Air-to-Ground, Ground-t-Air
  - Day and Night Operations
  - System is Adaptable
    - Variable Exercise Levels (up to 1830 players)
    - Variable Unit and Equipment Mixes (Reconfigu
    - Variable Locations (512-806 MHz)



SPECIFIC AREAS OF INTEREST (FY02-03)

- **Primary focus is Research and Development efforts associated with the migration to Objective MAIS**
- **Current goals are to further miniaturize the dismounted troop vests and instrument emerging weapons (e.g. M19, OICW)**
  - **Player Unit Upgrades**
  - **Rotary Wing/Air Defense Artillery fly-out**
  - **Surrogate/Threat Weapon Instrumentation**
  - **Communications Architecture Upgrade**

ACQUISITION/CONTRACTING

Strategy

- **Five Year Objective MAIS Management Execution Plan (MEP) to migrate current MAIS to Objective MAIS was approved in May 2001**
- **Multiple awards in a Full & Open Competition environment except when specific Small Business Set- asides can be identified**
- **Technology Areas of Interest:**
  - Data collection, transmission, storage, and mining
  - Global Positioning technologies
  - Laser transmission and detection
  - Computational upgrades
  - Terrain database technologies
  - Battery technologies
- **Current technology providers**
  - Lockheed-Martin
  - Advanced CounterMeasure Systems
  - Anteon

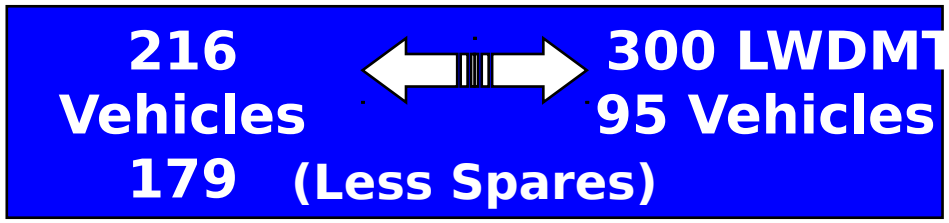
Issues

- **Incorporate existing, new, and emerging technologies into Objecti**
- **Seeking industry's technical recommendations**
- **Upcoming Test Requirements in flux**
- **Government versus Industry as the Systems Integrator**
- **Migration timelines from R&D to Production**

INTERIM END-STATE

- 216 Vehicle Player Kits
- 300 Dismounted Soldier Kits
- 2 (+) C3 Centers
- 2 (+) Sets of Relays

(FY02-04)



OBJECTIVE END-STATE

- 300 Vehicle Player Kits
- 24 Rotary Wing Aircraft Kits
- 4 Fixed Wing Aircraft Kits (?)
- 20 Supplemental Vehicle Kits
- 600 Dismounted Soldier Kits
- 2 (+) C3 Centers/Sets of Relays

(FY05 and beyond)

MAIS STRICOM TEAM

NAME	TITLE	Organization
Craig Janisz	Project Director	IMO
Richard Keller	Project Engineer	Engineering
Tom Newton	Systems Engineer	Engineering
Sue-Ellen Sahagun-Dorland	Contracts Specialist	Acquisition
Kathy Payne	Life Cycle Support	Operations
Ivette Feliciano	Cost Analyst	Resource Management
Ross Hempstead	Senior Program Analyst	AEgis Technologies
James Hutson	Senior Cost Analyst	AEgis Technologies
Alexandra Charles	Program Analyst	AEgis Technologies
Arthur Grunwald	Lead Analyst	AEgis Technologies

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PROGRAM DESCRIPTION

CUSTOMER/ USERS

U.S. Army Test and Evaluation Command (ATEC)/Operational Test Command(OTC) for Operational and Force-on-Force testing of:

- M1A2 SEP
- M2A3 IOTE
- Canadian LAV-III
- FBCB2 (?)
- Land Warrior (?)
- LOSAT
- Comanche

DESCRIPTION

• MAIS Provides Field Instrumentation to Support Army Transformation Operational and Force Development Tests Employing RTCA

• MAIS is a Fully Transportable, Encrypted, and High Fidelity System which Enables Real Time Exercise Monitoring and Control of up to 1830 Players

• Supports Five Categories of Players (Ground Vehicles, Rotary Wing, Fixed Wing, Dismounted Soldiers, and Surrogate Weapons)

FUNCTIONAL DATA

MAIS is a Dedicated Mode system and is currently pursuing DITSCAP Certification Level III.

MAIS
FLEXIBILITY

- **MAIS is Reconfigurable and Reprogrammable**

  – **Reconfigurable**: MAIS Player Units Can Assume the Fire
  Power and Vulnerability of any Existing or Conceived
  Weapon Through Variable Ph/Pk Tables.

  – **Reprogrammable**: MAIS Player Units can Interface to
  the Host Weapon Platform’s data bus to Control MAIS in
  Emulating the Host’s Weapons and Countermeasures and

IMO
TS

MAIS
MASTER PROGRAM SCHEDULE/FUNDING

Fiscal Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Requirement Approval	▼								
Player Unit Upgrades		△				▽			
Rotary Wing/ADA Flyout		△				▽			
Surrogate/Threat Weapon Instrum.		△				▽			
Communications Arch Upgr.		△				▽			
	Each effort shown above will include two or more development/production phases.								
IOC/FOC						△			

	2001	2002	2003	2004	2005	2006	2007	2008	2009
		$$	$$$	$$$$	$$$$	$$$$	$$$$	$$$$	$$$$

SUMMARY

- **AREAS OF INTEREST**
  - **Player Unit Upgrades (bat/power, min, vest enh)**
  - **Rotary Wing/Air Defense Artillery fly-out models**
  - **Surrogate/Threat Weapon Instrumentation**
  - **Communications Architecture Upgrade**
- **STRATEGY**
  - **Begin Migration from Current to Objective MAIS**
  - **Five Year Objective MAIS MEP approved in May 2001**
  - **Multiple awards under STOC**
  - **Incorporate existing, emerging, and new technologies into Objective MAIS**